WEST Search History

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DATE: Tuesday, February 03, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT; PLUR=YES; OP=ADJ		
☐	L12	L11 and l7	0
☐	L11	19981019	11
☐	L10	L9 and Enterobacter	28
☐	L9	L8 and (Corynebacter$4 or coryneform or coryneform bacter$4)	87
☐	L8	Citrate synthase or Citrate condensing enzyme or Citrate synthetase or Citric acid synthase or Citrogenase or Condensing enzyme or Oxalacetic transacetase	393
☐	L7	L6 or l5 or l4 or l3 or l2 or l1	25311
☐	L6	(435/320.1)!.ccls.	22295
☐	L5	(435/252.33)!.ccls.	2570
☐	L4	(435/193)!.ccls.	1454
☐	L3	(435/183)!.ccls.	4357
☐	L2	(435/110)!.ccls.	208
☐	L1	(435/106)!.ccls.	443

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Search Results - Record(s) 1 through 11 of 11 returned.

☐ 1. Document ID: US 6518013 B1

Using default format because multiple data bases are involved.

L11: Entry 1 of 11 File: USPT Feb 11, 2003

US-PAT-NO: 6518013
DOCUMENT-IDENTIFIER: US 6518013 B1

TITLE: Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission

DATE-ISSUED: February 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barney; Shawn O'Lin	Cary	NC		
Lambert; Dennis Michael	Cary	NC		
Petteway; Stephen Robert	Cary	NC		

US-CL-CURRENT: 435/5; 424/230.1, 530/300, 530/324, 530/325, 530/326

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 6479055 B1

L11: Entry 2 of 11 File: USPT Nov 12, 2002

US-PAT-NO: 6479055
DOCUMENT-IDENTIFIER: US 6479055 B1
** See image for Certificate of Correction **

TITLE: Methods for inhibition of membrane fusion-associated events, including respiratory syncytial virus transmission

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 3. Document ID: US 6342261 B1

L11: Entry 3 of 11 File: USPT Jan 29, 2002

US-PAT-NO: 6342261
DOCUMENT-IDENTIFIER: US 6342261 B1

TITLE: Method of preserving foods using noble gases

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 4. Document ID: US 6228983 B1

L11: Entry 4 of 11 File: USPT May 8, 2001

US-PAT-NO: 6228983
DOCUMENT-IDENTIFIER: US 6228983 B1
**** See image for Certificate of Correction ****

TITLE: Human respiratory syncytial virus peptides with antifusogenic and antiviral activities

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 5. Document ID: US 6093794 A

L11: Entry 5 of 11 File: USPT Jul 25, 2000

US-PAT-NO: 6093794
DOCUMENT-IDENTIFIER: US 6093794 A

TITLE: Isolated peptides derived from the Epstein-Barr virus containing fusion inhibitory domains

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

---

☐ 6. Document ID: US 6068973 A

L11: Entry 6 of 11 File: USPT May 30, 2000

US-PAT-NO: 6068973
DOCUMENT-IDENTIFIER: US 6068973 A

TITLE: Methods for inhibition of membrane fusion-associated events, including influenza virus

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 7. Document ID: US 6060065 A

L11: Entry 7 of 11 File: USPT May 9, 2000

US-PAT-NO: 6060065
DOCUMENT-IDENTIFIER: US 6060065 A

TITLE: Compositions for inhibition of membrane fusion-associated events, including influenza virus transmission

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 8. Document ID: US 6054265 A

L11: Entry 8 of 11 File: USPT Apr 25, 2000

US-PAT-NO: 6054265
DOCUMENT-IDENTIFIER: US 6054265 A

TITLE: Screening assays for compounds that inhibit membrane fusion-associated events

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 9. Document ID: US 6017536 A

L11: Entry 9 of 11 File: USPT Jan 25, 2000

US-PAT-NO: 6017536
DOCUMENT-IDENTIFIER: US 6017536 A

TITLE: Simian immunodeficiency virus peptides with antifusogenic and antiviral activities

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 10. Document ID: US 6013263 A

L11: Entry 10 of 11 File: USPT Jan 11, 2000

US-PAT-NO: 6013263
DOCUMENT-IDENTIFIER: US 6013263 A

TITLE: Measles virus peptides with antifusogenic and antiviral activities

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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☐ 11. Document ID: US 5891686 A

L11: Entry 11 of 11 File: USPT Apr 6, 1999

US-PAT-NO: 5891686
DOCUMENT-IDENTIFIER: US 5891686 A

TITLE: Method of production of poly-.beta.-hydroxyalkanoate copolymers

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
L10 and @ad<19981019	11

Display Format: - Change Format

Previous Page Next Page Go to Doc#

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=> s citrate synthase/cn
L1            1 CITRATE SYNTHASE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   9027-96-7  REGISTRY
CN   Synthase, citrate (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Citrate (si)-synthase
CN   Citrate condensing enzyme
CN   Citrate synthase
CN   Citrate synthetase
CN   Citric acid synthase
CN   Citric synthase
CN   Citric-condensing enzyme
CN   Citrogenase
CN   Condensing enzyme
CN   E.C. 4.1.3.7
CN   Oxalacetic transacetase
DR   9013-17-6
MF   Unspecified
CI   MAN
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
       CA, CAPLUS, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, MSDS-OHS,
       NAPRALERT, PROMT, TOXCENTER, USPAT2, USPATFULL
     Other Sources:   EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            3176 REFERENCES IN FILE CA (1907 TO DATE)
              25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            3177 REFERENCES IN FILE CAPLUS (1907 TO DATE)
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=> d full his

     (FILE 'HOME' ENTERED AT 13:09:21 ON 03 FEB 2004)

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L1             1 SEA ABB=ON  PLU=ON  CITRATE SYNTHASE/CN
                 D

     FILE 'HCAPLUS' ENTERED AT 13:10:21 ON 03 FEB 2004

     FILE 'REGISTRY' ENTERED AT 13:10:24 ON 03 FEB 2004
                 SET SMARTSELECT ON
L2               SEL PLU=ON  L1 1- CHEM :      13 TERMS
                 SET SMARTSELECT OFF

     FILE 'HCAPLUS' ENTERED AT 13:10:24 ON 03 FEB 2004
L3            4410 SEA ABB=ON  PLU=ON  L2
                 E CORYNEFROM BACTERIA
                 E CORYNEFROM BACTERIA/CT
                 E CORYNEBACTERIA/CT
                 E E3+ALL
                 E E2+ALL
L4              26 SEA ABB=ON  PLU=ON  L3 (L) (CORYNEBACTER? OR BACTERIA (L)
                   CORYNEFORM OR CORYNEFORM BACTER? )
L5              17 SEA ABB=ON  PLU=ON  L4 AND PD<19991018
L6              16 SEA ABB=ON  PLU=ON  L4 AND PD<19981019
                 E ENTEROBACTER/CT
                 E E3+ALL
L7               0 SEA ABB=ON  PLU=ON  L6 AND (ENTEROBACTER OR ENTEROBACTER/CT)
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=> d ibib ab l6 1-16

L6 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:350437 HCAPLUS
DOCUMENT NUMBER: 129:94491
TITLE: Fed-batch production of L-lysine by Corynebacterium glutamicum
AUTHOR(S): Sassi, A. Hadj; Fauvart, L.; Deschamps, A. M.; Lebeault, J. M.
CORPORATE SOURCE: Laboratoire de Microbiologie Alimentaire et de Biotechnologie-ENSSTAB, Universite Bordeaux, Talence, 33405, Fr.
SOURCE: Biochemical Engineering Journal (1998), 1(1), 85-90
CODEN: BEJOFV; ISSN: 1369-703X
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The growth rate, glucose consumption rate, and prodn. rate of an L-lysine producing **Corynebacterium** glutamicum mutant were studied in batch and fed-batch cultures. In batch fermn., higher L-lysine productivity (1.93 g L-1 h-1) and L-lysine yield of 0.70 g g-1 were obtained with lower lysine excretion (34 g L-1). A strong enhancement of L-lysine prodn. (110.6 g L-1) was obtained in fed-batch culture, whereas the kinetic parameters remained lower than those obsd. in batch cultures. In both culture techniques, high L-lysine productivity and L-lysine yield occurred at the lower growth rate ranging from 0.02 h-1. Enzymic anal. revealed that the higher L-lysine prodn. could be obtained under a higher phosphoenolpyruvate carboxylase/**citrate synthase** enzyme activity ratio to avoid biomass prodn. at the expense of L-lysine. This is a direct proof of the important role of both phosphoenolpyruvate carboxylase activity and the compn. of the growth medium on the L-lysine overprodn. phase.
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:184754 HCAPLUS
DOCUMENT NUMBER: 128:292608
TITLE: Determination of the carbon flux in the central metabolism of Corynebacterium glutamicum by 13C-isotope analysis
AUTHOR(S): Marx, Achim
CORPORATE SOURCE: Inst. Biotechnologie, Forschungszentrum Juelich G.m.b.H., Juelich, D-52425, Germany
SOURCE: Berichte des Forschungszentrums Juelich (**1997*****) , **Juel-3459, 1-111 pp.**
CODEN: FJBEE5; ISSN: 0366-0885
DOCUMENT TYPE: **Report**
LANGUAGE: **German**
AB **All C fluxes of the central metab. of C. glutamicum were quantified and the role and coordination of single metabolic pathways were studied under different metabolic situations. A method based on 13C-data was established to quantify all metabolite fluxes of the central metab. Strong sensitivities were indicated between metabolic fluxes and 13C data, thus allowing the detn. of metabolite flux. When the 13C-content of the position oxalacetate C-4 was varied by the factor 2 it could be shown if anaplerotic prodn. of C4-bodies was via the carboxylation of C3-bodies or via the glyoxalate cycle. A hyperbolic relationship was shown for the bi-directional turnover of transketolase and the 13C-content of the position pentose-5-phosphate C-1 and for the bi-directional metabolite flux between C3-bodies of glycolysis and C4-bodies of the tricarboxylate (TCA) cycle and 13C-enrichment of the position oxalacetate C-2. The NADPH balance showed that, depending on the conditions, more NADPH was produced than necessary for the synthesis of biomass and products. The NADPH excess was 16-67% in relation to the glucose uptake rate. Depending on the metabolic situation, the C4-body-decarboxylation was 10-132% and opposed to the carboxylation of C3-bodies for the anaplerotic supply of the TCA cycle. C4-body-decarboxylation and NADPH-excess as adaptations to**

high prodn. of Lys were minimal, with a yield coeff. of 0.32 molLysmolglucose-1. The contribution of malate enzyme to a total NADPH prodn. of 211% was small. The pentose phosphate pathway (PPP) and the TCA cycle produced 3/4 and 1/4, resp., of the total NADPH. Overexpression of glutamate dehydrogenase in a mutant of strain MH20-22B resulted in low TCA cycle flux and a high metabolite flux through the oxidative PPP. A high TCA cycle flux was detected during glutamate prodn. using strain LE4. The PPP flux was low in this strain. In a mutant of strain MH20-22B producing Lys and using NADH for synthesis of glutamate, TCA cycle flux was 79% and that of PPP was 26%. The low PPP was due to low NADPH consumption and high NADPH prodn. from isocitrate dehydrogenase of the TCA cycle. A strain ATCC 13032 isocitrate dehydrogenase mutant with a blocked TCA cycle showed a PPP flux of 62%. This mutant showed a glyoxalate cycle active in vivo when metabolizing glucose. This metabolite flux was 53%. A flux of 16% produced anaplerotically C4-bodies. At a flux of 37% the glyoxalate cycle released CO2 by C4-body decarboxylation and pyruvate dehydrogenase.

L6 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:631539 HCAPLUS
DOCUMENT NUMBER: 127:305184
TITLE: Physiological and NMR-spectroscopic investigations of in vivo activity of central metabolism pathways in wild and recombinant strains of Corynebacterium glutamicum
AUTHOR(S): Wendisch, Volker
CORPORATE SOURCE: Inst. Biotechnologie, Forschungszentrum Julich G.m.b.H., Juelich, D-52425, Germany
SOURCE: Berichte des Forschungszentrums Juelich (***1997***) , Juel-3397, 1-111 pp.
CODEN: FJBEE5; ISSN: 0366-0885
DOCUMENT TYPE: Report
LANGUAGE: German
AB The C flux in the central metab. of C. glutamicum grown on glucose and/or acetate was detd. quant. and qual. The physiol. characterization of the growth of C. glutamicum revealed that this organism is able to metabolize acetate and glucose simultaneously. The C-uptake rates were quite similar with 900-1100 nmol C/mg protein. To analyze the C flux by 13C-labeling expts., a new NMR-spectroscopic method was developed, calibrated, and applied. This 1H-spin-echo-NMR method for the detn. of 13C-labeled non-protonated C-atoms, for example in carboxyl groups of amino acids, is 4-8-fold more precise than conventional NMR methods. Qual. C flux analyses revealed that beside the PEP-carboxylase C. glutamicum possesses another anaplerotic C3-carboxylating reaction, a pyruvate carboxylase. In addn., an alternative acetate activation to the acetate-kinase-phosphotransacetylase way was found in C. glutamicum which is suggested an acetyl-CoA-synthetase. The C fluxes in the central metab. of C. glutamicum growing on glucose and/or acetate were quantified for the 1st time by 13C-labeling expts. and subsequent NMR-spectroscopic anal. of cellular amino acids in combination with the metabolite balance. The in vivo activities of the citrate synthase increased from 120 mU/mg protein on glucose to over 220 mU/mg protein on glucose plus acetate up to 410 mU/protein on acetate. The anaplerotic function was adopted by the PEP carboxylase and the pyruvate carboxylase at growth on glucose. At growth on acetate and surprisingly also at growth on glucose plus acetate, the glyoxylate cycle was active in vivo as the only anaplerotic sequence with 99 and 50 mU/mg protein, resp. The characterization of glyoxylate cycle-deficient C. glutamicum strains, which were produced by directed deletion of the genes for isocitrate lyase and the malate synthase, revealed that the glyoxylate cycle is essential for the optimal growth on glucose plus acetate. The glyoxylate cycle enzymes isocitrate lyase and malate synthase are regulated genetically by control of transcription of their genes aceA and aceB. High intracellular concns. of the metabolite acetyl-CoA correlated with high specific activities of the enzymes of the acetate metab.

L6 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:572905 HCAPLUS
DOCUMENT NUMBER: 127:247178
TITLE: Metabolic and physiological studies of Corynebacterium

glutamicum mutants
AUTHOR(S): Park, S. M.; Sinskey, A. J.; Stephanopoulos, Gregory
CORPORATE SOURCE: Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SOURCE: Biotechnology and Bioengineering (***1997), 55(6), 864-879
CODEN: BIBIAU; ISSN: 0006-3592
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The physiol. and central carbon metab. of **Corynebacterium** glutamicum was investigated through the study of specific disruption mutants. Mutants deficient in phosphoenolpyruvate carboxylase (PPC) and/or pyruvate kinase (PK) activity were constructed by disrupting the corresponding gene(s) via transconjugation. Std. batch fermns. were carried out with these mutants and results were evaluated in the context of intracellular flux anal. The following were detd. (A) There is a significant redn. in the glycolytic pathway flux in the pyruvate kinase deficient mutants during growth on glucose, also evidenced by secretion of dihydroxyacetone and glyceraldehyde. The resulting metabolic overflow is accommodated by the pentose phosphate pathway (PPP) acting as mechanism for dissimilating, in the form of CO2, large amts. of accumulated intermediates. (B) The high activity through the PPP causes an overprodn. of reducing power in the form of NADPH. The overprodn. of biosynthetic reducing power, as well as the shortage of NADPH produced via the tricarboxylic acid cycle (as evidenced by a reduced **citrate synthase** flux), are compensated by an increased activity of the transhydrogenase (THD) enzyme catalyzing the reaction NADPH + NAD+ .tautm. NADP+ + NADH. The presence of active THD was also confirmed directly by enzymic assays. (C) Specific glucose uptake rates declined during the course of fermn. and this decline was more pronounced in the case of a double mutant strain deficient in both PPC and PK. Specific ATP consumption rates similarly declined during the course of the batch. However, they were approx. the same for all strains, indicating that energetic requirements for biosynthesis and maintenance are independent of the specific genetic background of a strain. The above results underline the importance of intracellular flux anal., not only for producing a static set of intracellular flux ests., but also for uncovering changes occurring in the course of a batch fermn. or as result of specific genetic modifications.

L6 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:332824 HCAPLUS
DOCUMENT NUMBER: 125:8698
TITLE: Process for producing L-lysine and L-glutamic acid by fermentation with coryneform bacteria in presence of excessive biotin
INVENTOR(S): Kimura, Eiichiro; Asakura, Yoko; Uehara, Akinori; Inoue, Sumio; Kawahara, Yoshio; Yoshihara, Yasuhiko; Nakamatsu, Tsuyoshi
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9606180	A1	19960229	WO 1995-JP1586	19950809 <--
W: BR, CN, JP, US, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 780477	A1	19970625	EP 1995-927999	19950809 <--
EP 780477	B1	20030409		
R: CH, DE, ES, FR, GB, IT, LI, NL				
CN 1161059	A	19971001	CN 1995-195728	19950809 <--
CN 1079836	B	20020227		
BR 9508730	A	19971021	BR 1995-8730	19950809 <--

JP 2926991 B2 19990728 JP 1995-507633 19950809
EP 1293560 A2 20030319 EP 2002-25583 19950809
R: CH, DE, ES, FR, GB, IT, LI, NL
ES 2191710 T3 20030916 ES 1995-927999 19950809
US 5846790 A 19981208 US 1997-776597 19970218
PRIORITY APPLN. INFO.: JP 1994-195465 A 19940819
EP 1995-927999 A3 19950809
WO 1995-JP1586 W 19950809

AB L-glutamic acid is produced by imparting to a coryneform L-glutamate producing bacterium the temp. sensitivity with respect to biotin antagonists to prep. a variant capable of producing L-glutamic acid in a medium contg. excessive biotin in the absence of a biotin antagonist and culturing the variant in a liq. medium. L-lysine and L-glutamic acid are produced at the same time by imparting to a coryneform L-glutamate producing bacterium the temp. sensitivity with respect to biotin antagonists and the ability to produce L-lysine to prep. a variant capable of producing L-lysine and L-glutamic acid in a medium contg. excessive biotin in the absence of a biotin antagonist and culturing the variant in a liq. medium.

L6 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:597380 HCAPLUS
DOCUMENT NUMBER: 121:197380
TITLE: Nucleotide sequence, expression and transcriptional analysis of the **Corynebacterium** glutamicum gltA gene encoding **citrate synthase**
AUTHOR(S): Eikmanns, Berhard J.; Thum-Schmitz, Natalie; Eggeling, Lothar; Luedtke, Kai-Ulf; Sahm, Hermann
CORPORATE SOURCE: Institut Biotechnologie, 1 des Forschungszentrums, Juelich, D-52425, Germany
SOURCE: Microbiology (Reading, United Kingdom) (**1994**), 140(8), 1817-28
CODEN: MROBEO; ISSN: 1350-0872
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Citrate synthase** catalyzes the initial reaction of the citric acid cycle and can therefore be considered as the rate-controlling enzyme for the entry of substrates into the cycle. In **Corynebacterium** glutamicum, the specific activity of **citrate synthase** was found to be independent of the growth substrate and of the growth phase. The enzyme was not affected by NADH or 2-oxoglutarate and was only weakly inhibited by ATP (apparent Ki = 10 mM). These results suggest that in C. glutamicum neither the formation nor the activity of **citrate synthase** is subject to significant regulation. The citrate synthesis gene, gltA, was isolated, subcloned on plasmid pJC1 and introduced into C. glutamicum. Relative to the wild-type the recombinant strains showed six- to eight-fold higher specific **citrate synthase** activity. The nucleotide sequence of a 3007 bp DNA fragment contg. the gltA gene and its flanking regions was detd. The predicted gltA gene product consists of 437 amino acids (Mr 48,936) and shows up to 49.7% identity with **citrate synthase** polypeptides from other organisms. Inactivation of the chromosomal gltA gene by gene-directed mutagenesis led to absence of detectable **citrate synthase** activity and to citrate (or glutamate) auxotrophy, indicating that only one **citrate synthase** is present in C. glutamicum. Transcriptional anal. by Northern (RNA) hybridization and primer extension expts. revealed that the gltA gene is monocistronic (1.45 kb mRNA) and that its transcription initiates at two consecutive G residues located 121 and 120 bp upstream of the translational start.

L6 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:453650 HCAPLUS
DOCUMENT NUMBER: 121:53650
TITLE: Regulation of phospho(enol)pyruvate- and oxaloacetate-converting enzymes in Corynebacterium glutamicum
AUTHOR(S): Jetten, Mike S. M.; Pitoc, George A.; Follettie, Maximillian T.; Sinskey, Anthony J.

CORPORATE SOURCE: Dep. Biol., Massachusetts Inst. Technol., Cambridge, MA, 02139, USA
SOURCE: Applied Microbiology and Biotechnology (**1994**), 41(1), 47-52
CODEN: AMBIDG; ISSN: 0175-7598
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The presence and properties of the enzymes involved in the synthesis and conversion of phospho(enol)pyruvate (PEP) and oxaloacetate (OAA), the precursors for aspartate-derived amino acids, were investigated in three different **Corynebacterium** strains. This study revealed the presence of both PEP carboxykinase (0.29 .mu.mol.min-1.mg-1 of protein [units (U).mg-1]) and PEP synthetase (0.13 U.mg-1) in C. glutamicum as well as pyruvate kinase (1.4 U.mg-1) and PEP carboxylase (0.16 U.mg-1). With the exception of PEP carboxykinase, these activities were also present in glucose-grown C. flavum and C. lactofermentum. Pyruvate carboxylase activity was not detected in all three species cultivated on glucose or lactate. At least five enzyme activities that utilize OAA as a substrate were detected in crude exts. of C. glutamicum: **citrate synthase** (2 U.mg-1), malate dehydrogenase (2.5 U.mg-1), glutamate:OAA transaminase (1 U.mg-1), OAA-decarboxylating activity (0.89 U.mg-1) and the previously mentioned PEP carboxykinase (0.29 U.mg-1). The partially purified OAA-decarboxylase activity of C. glutamicum was completely dependent on the presence of inosine diphosphate and Mn2+, had a Michaelis const. (Km) of 2.0 mM for OAA and was inhibited by ADP and CoA (CoA). Examn. of the kinetic properties showed that adenine nucleotides and CoA derivs. have reciprocal but reinforcing effects on the enzymes catalyzing the interconversion of pyruvate, PEP and OAA in C. glutamicum. A model for the regulation of the carbon flow based on these findings is presented.

L6 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:515498 HCAPLUS
DOCUMENT NUMBER: 119:115498
TITLE: Increasing yields of L-lysine from coryneform bacteria
INVENTOR(S): Kircher, Manfred; Bachmann, Bernd
PATENT ASSIGNEE(S): Degussa A.-G., Germany
SOURCE: Eur. Pat. Appl., 4 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
EP 551614	A2	19930721	EP 1992-121027	19921210	<--
EP 551614	A3	19940817			
EP 551614	B1	19960410			
R: BE, DE, DK, ES, FR, GB, IE, IT					
DE 4201085	A1	19930722	DE 1992-4201085	19920117	<--
SK 280158	B6	19990910	SK 1992-3927	19921228	
BR 9300119	A	19930824	BR 1993-119	19930112	<--
JP 06197779	A2	19940719	JP 1993-4777	19930114	<--
AU 9331819	A1	19930722	AU 1993-31819	19930115	<--
AU 670767	B2	19960801			
HU 64398	A2	19931228	HU 1993-104	19930115	<--
HU 216326	B	19990628			

PRIORITY APPLN. INFO.: DE 1992-4201085 19920117

AB Yields of lysine from producer **coryneform bacteria** are increased by using microorganisms selected for resistance to the lysine analog aspartic acid-.beta.-Me ester (I). An S-(2-aminoethyl)-cysteine resistant **Corynebacterium** glutamicum was mutagenized and selected for resistance to I. The parental strain yielded lysine.HCl at 36.5 g/L and two I-resistant isolates yielded lysine.HCl at 40.0 and 42.8 g/L. As the yield of lysine increased, levels of **citrate synthase** in the organism dropped.

L6 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:484665 HCAPLUS
DOCUMENT NUMBER: 117:84665
TITLE: An integrating non-autonomously replicating expression vector for stable transformation of Corynebacteria
INVENTOR(S): Guyonvarch, Armel Andre Yves; Reyes Alvarado, Oscar Julio; Labarre, Jean Christian Jocelyn; Bonamy, Celine Anne Marie; Leblon, Gerard Louis Andre
PATENT ASSIGNEE(S): Centre National de la Recherche Scientifique, Fr.
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9202627	A1	19920220	WO 1991-FR656	19910808	<--
W: AU, BR, CA, FI, HU, JP, KR, SU, US					
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE					
FR 2665711	A1	19920214	FR 1990-10126	19900808	<--
FR 2665711	B1	19930813			
ZA 9106216	A	19920429	ZA 1991-6216	19910807	<--
CA 2067240	AA	19920209	CA 1991-2067240	19910808	<--
AU 9184423	A1	19920302	AU 1991-84423	19910808	<--
AU 646886	B2	19940310			
CN 1061624	A	19920603	CN 1991-108861	19910808	<--
EP 495078	A1	19920722	EP 1991-915423	19910808	<--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE					
BR 9105857	A	19920929	BR 1991-5857	19910808	<--
JP 05502797	T2	19930520	JP 1991-514354	19910808	<--
HU 63656	A2	19930928	HU 1992-1166	19910808	<--
FI 9201527	A	19920407	FI 1992-1527	19920407	<--

PRIORITY APPLN. INFO.: FR 1990-10126 19900808
WO 1991-FR656 19910808

AB Expression vectors that stably integrate into the chromosome of **Corynebacteria** (integrons) are described. These vectors do not replicate in this host and so must integrate to survive. The vector carries selectable markers and a sequence to direct homologous integration into the host chromosome; the plasmid may also use transposition functions such as those from phage Mu. The gltA gene of C. melassecola was cloned by complementation of a **citrate synthase**-defective mutant of Escherichia coli. This gene was used as the site for homologous recombination in a series of integron constructs. Plasmid pCGL519 contg. an integron of the gltA gene, the aphIII gene as selective marker, and a multicloning site was prepd. The integron is released from the replicon carrying it in Escherichia coli by restriction digestion immediately before introduction into **Corynebacterium** glutamicum. Transformants carrying the integron all showed integration into the gltA gene. At very high levels of the selective antibiotic, kanamycin, tandem duplication of the gene was found. Similar vectors based on mini-Mu were also constructed.

L6 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1992:52546 HCAPLUS
DOCUMENT NUMBER: 116:52546
TITLE: Integron-bearing vectors: a method suitable for stable chromosomal integration in highly restrictive Corynebacteria
AUTHOR(S): Reyes, O.; Guyonvarch, A.; Bonamy, C.; Salti, V.; David, F.; Leblon, G.
CORPORATE SOURCE: Inst. Genet. Microbiol., Univ. Paris-Sud, Orsay, 91405, Fr.
SOURCE: Gene (**1991**), 107(1), 61-8
CODEN: GENED6; ISSN: 0378-1119
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A pBR322-derived plasmid (pCGL107) that carries that **Corynebacterium** melassecola ATCC17965 analog of Escherichia coli

gdhA gene (encoding glutamate dehydrogenase), was introduced into the related strain, Brevibacterium lactofermentum CGL2002, by electroporation and integrated into its chromosome by homologous recombination. However, pCGL107 cannot integrate into C. melassecola, since the host restriction prevents successful electroporation by E. coli-modified DNA. Nevertheless, B. lactofermentum-modified replicative plasmid DNA can be transformed by electroporation into C. melassecola; thus pCGL519-2, a shuttle plasmid that carries the C. melassecola analog of E. coli gltA (encoding **citrate synthase**), was extd. from the former host and electroporated into the latter. Rare restriction sites conveniently placed in pCGL519-2 were used to recover a replicon-less cartridge called integron, that contains a selectable marker and gltA within a single fragment. Integron prepd. from pCGL519-2 DNA which had been extd. from C. melassecola, and thus, was capable of eluding the C. melassecola restriction barrier(s), was successfully electroporated into this host. The mol. anal. of the resulting transformants suggest that they result from the integration of a single circular integron mol. by homologous recombination between the gltA regions of the host genome and the integron. These transformants were stable for 30 generations in the absence of selection.

L6 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:476526 HCAPLUS
DOCUMENT NUMBER: 111:76526
TITLE: Glutamic acid fermentation with recombinant Corynebacterium
INVENTOR(S): Fujii, Mikio; Nakajo, Yukihiro; Fujino, Kenichiro; Takeda, Hirohiko; Fukami, Katsuya; Honmachi, Takenori
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63214189	A2	19880906	JP 1987-47759	19870304 <--
JP 2520895	B2	19960731		

PRIORITY APPLN. INFO.: JP 1987-47759 19870304
AB Recombinant **Corynebacterium** contg. the genes of the same encoding glutamate dehydrogenase (GDH) and isocitrate dehydrogenase (ICDH), or addnl. contg. the genes aconitate hydratase (AH) and/or **citrate synthase** (CS) are prepd. and used for prodn. of glutamic acid. C. melassecola 801 was transformed with plasmids pIG101, pAIG321, pCIG231, and pCAIG4 that carried the genes encoding GDH and ICDH, GDH and ICDH and AH, GDH and ICDH and CS, and GDH and ICDH and AH and CS, resp. At the end of fermn., the concn. of glutamic acid accumulated in the medium was 10.9 (57% of sugar), 10.6 (58), 11.2 (60), and 11.2 g/dL (61), resp. The concn. of glutamic acid in the parental 801 strain was 9.1 g/dL (52%).

L6 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:113201 HCAPLUS
DOCUMENT NUMBER: 110:113201
TITLE: L-Glutamic acid and L-proline, their recombinant manufacture with Corynebacterium and Brevibacterium
INVENTOR(S): Katsumata, Ryoichi; Yokoi, Haruhiko; Kino, Kuniki
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 63119688	A2	19880524	JP 1986-265297	19861107 <--	
JP 07121228	B4	19951225			

PRIORITY APPLN. INFO.: JP 1986-265297 19861107

AB Glutamic acid and proline are manufd. by cultivating recombinant **Corynebacterium** or Brevibacterium contg. the gene encoding **citric acid synthase**. Plasmid pEgltA-1 contg. the synthase gene cloned from the chromosomal DNA of Escherichia coli was linked to plasmid pCG11, a vector for both Corynecbacterium and Brevibacterium, to form recombinant plasmid pEgltA-2. **Corynebacterium** glutamicum transformed with pEgltA-2 produced glutamic acid 31.2 mg/mL culture fluid.

L6 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:17251 HCAPLUS
DOCUMENT NUMBER: 108:17251
TITLE: Recombinant DNA containing a gene coding for an enzyme catalyzing a reaction in the TCA cycle
INVENTOR(S): Takeda, Yasuhiko; Fukami, Katsuya; Nakajo, Yukihiro; Fujii, Mikio; Fujino, Kenichiro
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Fr. Demande, 109 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
FR 2590592	A1	19870529	FR 1986-16406	19861125	<--
FR 2590592	B1	19891222			
JP 62166890	A2	19870723	JP 1986-8158	19860120	<--
JP 62294086	A2	19871221	JP 1986-136083	19860613	<--
JP 62201585	A2	19870905	JP 1986-279888	19861126	<--

PRIORITY APPLN. INFO.: JP 1985-263879 19851126
JP 1986-8158 19860120
JP 1986-136083 19860613

AB A DNA fragment contg. a gene coding for **citrate synthase** (CS) aconitate hydratase, or isocitrate dehydrogenase of the TCA cycle is prepd. from glutamic acid-producing **coryneform bacteria**, inserted into plasmids, and used to infect microorganisms for application in the prodn. of amino acids, nucleic acids, and analogs in high yield. DNA of **Corynebacterium** melassecola 801 was extd., cleaved with XbaI, and inserted into plasmid pBR325. An Escherichia coli K12 strain lacking the CS gene was infected with the recombinant plasmids for selection and isolation of plasmids contg. the CS gene. Plasmid pAG401 conferred a CS-specific activity of 0.16 (.mu.mol citric acid produced/mg protein/min) as opposed to an activity of 0.02 for the uninfected strain or for the strain infected with plasmid pBR325.

L6 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:484907 HCAPLUS
DOCUMENT NUMBER: 99:84907
TITLE: Peculiarities of central metabolism in coryneform bacteria
AUTHOR(S): Sandanov, Ch. M.; Eroshina, N. V.; Tsyrenov, V. Zh.; Golovlev, E. L.
CORPORATE SOURCE: Inst. Biokhim. Fiziol. Mikroorg., Pushchino, USSR
SOURCE: Mikrobiologiya (**1983**), 52(3), 365-9
CODEN: MIKBA5; ISSN: 0026-3656
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Using glucose and acetate as C sources, the enzymes of energy metab. were studied in 2 groups of coryneform bacteria: corynebacteria (Corynebacterium flavum, C. ammoniagenes, and C. stationis); and rhodococci (Rhodococcus erythropolis and R. globerulus). Both groups had similar patterns of activities for enzymes of the tricarboxylic acid cycle but were different with respect to enzymes of the glyoxalate shunt. Phosphoketolase activity was higher in rhodococci than in corynebacteria,

whereas 2-ketoglutarate dehydrogenase activity was high in corynebacteria and absent in most rhodococci.

L6 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1982:160802 HCAPLUS
DOCUMENT NUMBER: 96:160802
TITLE: Fermentative production of L-proline
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
JP 57002691	A2	19820108	JP 1980-75954	19800605	<--
JP 62036679	B4	19870807			

PRIORITY APPLN. INFO.: JP 1980-75954 19800605
AB L-proline (I) [147-85-3] is produced by culturing a mutant of Brevibacterium or **Corynebacterium** having >1.4-fold more citrate oxaloacetate lyase [**9027-96-7**] activity than the parent. Thus, B. flavum AJ 11512 was cultured with shaking at 31.degree. for 72 h in a pH 7.0 medium contg. glucose 10, KH_2PO_4 0.1, $MgSO_4$ 0.04, and $CaCO_3$ 5%, plus trace amts. of $MnSO_4$, $FeSO_4$, biotin, thiamin, and soybean protein hydrolyzate, along with 15 mg isoleucine/dL. The prodn. of I was 3.6 vs. 3.1 g/dL in the parent strain (AJ 3416).

L6 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1971:49917 HCAPLUS
DOCUMENT NUMBER: 74:49917
TITLE: Regulation of the tricarboxylic acid cyle in bacteria. Comparison of citrate synthases from different bacteria
AUTHOR(S): Flechtner, Valerie R.; Hanson, Richard S.
CORPORATE SOURCE: Dep. Bacteriol., Univ. Wisconsin, Madison, WI, USA
SOURCE: Biochimica et Biophysica Acta (**1970**), 222(2), 253-64
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Citrate synthase** (I) from Azotobacter vinelandii was activated by AMP and inhibited by ATP and NADH. I from Rhodospirillum rubrum was inhibited by ATP, while I from Salmonella typhimurium was inhibited by NADH and .alpha.-ketoglutarate. I from Pseudomonas fluorescens was inhibited by ATP and NADH, NADH inhibition being relieved by AMP. The activity of the enzyme from **Corynebacterium** lilium, a glutamate excretor, was weakly inhibited by ATP and NADH. A comparison of the modulation of the enzyme activities from eight microorganisms representing different physiol. groups is presented.